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Dystopian Language and Thought:
The Sapir-Whorf Hypothesis Applied to Created Forms of English

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Introduction

The genre of science fiction is a haven for the creation of new worlds, universes, and projections of the future. Many versions of the future represent dystopian societies. While the word dystopia often evokes images of hellish landscapes or militarized super-cities, the word dystopia simply implies “a dis-placement of our reality.”¹ Dystopias usually originate from social or political conditions of the present. Political trends from modern day become the exaggerated dystopian regime of a fictional future, thereby creating a warning for readers in the present.²

Authors populate these new dystopian realities with unique cultures and histories. In order to be effective, these societies must invoke a certain level of plausibility. Language acts as a reflection of the society it serves, making it an invaluable tool for conveying the believability and individuality of a fictional society. For authors like J.R.R. Tolkien, creating a language meant reinventing both vocabulary and grammatical structure. Other authors, such as Anthony Burgess, used English as the foundation for their new language. Alterations to common English words, spellings, and phrasing create entirely new dialects to represent an extreme shift between a modern English-speaking society and the people of a projected future. For dystopias, or ‘displaced realities,’ deviations from Standard English indicate societal qualities that alienate the fictional world from our own.

The relationship between a society and its language is reciprocal. Language reflects the culture that fostered it, but culture is preserved and communicated through language. This inseparable bond illustrates, among other things, the Sapir-Whorf Hypothesis. As a cognitive linguistic principle, the Sapir-Whorf Hypothesis posits that language influences perception.³ Through this hypothesis, comprehension of new information or emotion

becomes linked to the words we would use to discuss that information or emotion. From the cultural perspective, language tints the manner in which people perceive cultural norms and how they express themselves as members of society.⁴ One version of the Sapir-Whorf Hypothesis, linguistic determinism, states that language controls thought. This control largely stems from the absence of words indicating a concept. Without the word, the concept does not exist for any person who speaks the language lacking that word. A softer form of the Sapir-Whorf Hypothesis, linguistic relativity, widens the gap between language and perception. It suggests that our interpretation of experience shifts based on linguistic grounding. Language could never prevent a person from perceiving an emotion or comprehending an idea, but it affects our approach each, and also structures how we convey those emotions and ideas to others.

The linguistic implications of the Sapir-Whorf Hypothesis are applicable to the created languages of fiction. In dystopian works, which are often social or political statements, the Sapir-Whorf Hypothesis can expose how characters perceive and interact with their own societies. The impact of an imagined culture on its constituents, as well as the perpetuation of that culture through each constituent, exists partially within the language they speak.

George Orwell explored the deterministic model of the Sapir-Whorf Hypothesis through the language of Newspeak in *1984*. Although the language is in its infancy within the timeline of the novel, the intent behind Newspeak and its eventual results are clear. The narrator, Winston, will be among the last Party members in Oceania capable of organizing thoughts that oppose the Party agenda. Orwell's precedent for creating a language to reflect a dystopian society helped begin the trend of created languages in dystopian fiction. In

years following, Anthony Burgess published *A Clockwork Orange*, narrated exclusively in a language he named Nadsat. Nadsat is not a deterministic language, but it reflects the narrator, Alex's, reverence for violence. Linguistic relativity reveals how Alex creates a counter-culture through Nadsat, allowing the artistic portrayal of socially-unacceptable crimes. In the novel *Riddley Walker*, Author Russell Hoban designed a language to emulate thousands of years of societal dissolution following a devastating nuclear war. The narrator, Riddley, recalls his journey through the wastes of "Inland." His language reflects a largely illiterate society that relies on aural histories and mythologies to retain knowledge. Riddley reads the world through mistranslated technological phrases and unique mythological metaphors.

The process Orwell began with linguistic determinism in *1984* evolves into the rich created languages of *A Clockwork Orange* and *Riddley Walker*. Orwell attempts to force characters to conform to a culture through language, while Burgess and Hoban explore the relationship between language, culture, and the individual. Through linguistic relativity, Burgess and Hoban create new approaches to their new realities, immersing readers in the minds of characters whose perception deviates from our own. Each of these worlds, in some way, exists only through the created language, and if converted into Standard English, their vitality becomes lost in translation. A breakdown of each language through the Sapir-Whorf Hypothesis is necessary to reveal the implications of these subtleties for characters in each novel.

Linguistic Determinism in *1984*

When Orwell created Newspeak for his dystopian novel, *1984*, he had clear intentions for the abbreviated, simplified version of English. He was not crafting a rich, lyrical language with poetic value or evocative imagery. In the case of other created languages, such as Tolkien's Sindarin, authors attempt to construct a vocabulary vast enough to convince readers that it is genuine and as capable of conveying meaning as any real language from our own world. Newspeak is quite literally the opposite of an "acceptable alternative" to English or any other language. Why would Orwell design a language so limiting in scope that it is impractical for narration and inaccessible to readers? The answer lies in his intentions for Newspeak, or rather, that he *has* intentions for Newspeak. The language feels manipulated, interrupted—the opposite of created languages designed to convince readers that they arose naturally within the fictional world they represent.

Orwell's plan for Newspeak was to use the language to control the thoughts, perceptions, and communication of Party members in the fictional dystopia of Oceania. Newspeak operates as a literal expression of linguistic determinism. As a specific form of the Sapir-Whorf Hypothesis, linguistic determinism dictates: "the language people speak helps determine the very way they think about their physical and social world."⁵ It is the stronger of the two Sapir-Whorf doctrines, the second being linguistic relativity. The deterministic relationship between language and perception is essential to the theory of Newspeak. In the most extreme sense, if a person has no word to represent a concept, whether that concept is a physical object or abstract feeling, then the concept simply does not exist for that person. If a person has no word to express the emotion of sadness, that person cannot experience sadness if linguistic determinism is indeed a true theory. Orwell

designs Newspeak under the assumption that linguistic determinism is a real phenomenon that impacts people of all languages. He deletes words and institutes political slogans in order to control how the Party members of 1984 perceive their lives and express themselves.

Linguistic determinism hinges on a contentious assumption, but as Clark has argued, “Whorf seemed to take for granted that language is primarily an instrument of thought. [However], language is first and foremost an instrument of communication... it is only derivatively an instrument of thought.”⁶ *Ingsoc*, the political party controlling Oceania, appears to operate under the same supposition as Whorf, but after many generations of Party members, will Big Brother or the Inner Party actually succeed in removing *thoughtcrime* from Outer Party members? An analysis of Newspeak must consider the language’s ability to determine perception, but also explore the damaging societal implications of applied linguistic determinism. Most importantly, can Newspeak even function as a language?

Because Orwell’s goal of linguistic control for Newspeak differs from the conventional intentions of a created language, Newspeak requires evaluation of its deterministic ability. If Newspeak is a “successful” language in terms of linguistic determinism, then it controls the thoughts and lives of all its practitioners according to its specific design. Orwell uses Newspeak sparingly throughout the text; a few Newspeak words such as *thoughtcrime* or *doublethink* work their way into Winston’s narration occasionally. The main narrative relies on the language of modern English. This juxtaposition of two forms of English within a single novel allows for another form of analysis for Newspeak— it may also be quantified by its limitation of expression compared

to the modern English. Does the limited vocabulary of Newspeak even make it a viable language option? The linguistic ability of Newspeak can thus be evaluated by two questions: 'Can Newspeak control perception as intended?' and 'Can the society of 1984 survive exclusively using Newspeak?'

One other proposed intention for Newspeak is also worth noting: the element of parody. A prominent inspiration for the simplified grammatical and lexical structures of Orwell's Newspeak was a reduced language created by linguist Charles Ogden.⁷ His revised language, called "Basic English" contained only the 850 that words he deemed essential for communication. Developed in 1930, Basic English would theoretically provide a streamlined, accessible language to facilitate communication, primarily for the purpose of business, between Britain and its many colonies. Ogden heralded his creation as the birth of a potential "second language" for millions of people formerly divided by their native tongues.⁸

At first, Orwell was keen to the potential benefits of Basic English, and in 1942 he wrote and produced a radio program discussing the language. He even designed a set of lessons after corresponding with Ogden, himself. However, Orwell's support of the language declined and morphed into ambivalence as he observed its implementation. While Newspeak is a language constructed to control the minds of its speakers, the language is also a parody of Ogden's Basic English.⁹ Howard Fink suggests that the most obvious relation between Basic English and Newspeak is the radically reduced vocabulary: "Orwell is frankly suspicious of Ogden's skepticism about the contribution of abstract vocabulary to exactness in language: 'reality' seems here to be equated by Ogden with 'simplicity'. Orwell underlines and attacks this idea by a parody-exaggeration of Ogden's

programme to ultimately ridiculous limit.”¹⁰ There are other, more specific indications of Ogden’s influence in Newspeak. In a comparison of the two languages, Fink notes that *shall* and *will* are simplified to include only the latter in Basic English, but Orwell expands this trend in Newspeak by dropping *should/shall* for the more “definitive” form *would/will*. The difference in these simplifications lies in the reasoning— Ogden views *shall* as an unnecessary distraction, while Orwell indicates that *should/shall* allows people too much freedom of intention.¹¹ Each of Orwell’s manipulations creates the most degrading, negative implications of Ogden’s simplifications. Orwell even takes the time to detail Newspeak for readers, twisting Ogden’s approach to simplification into a malevolent set of guidelines for mental enslavement.

Orwell’s meticulous outline of Newspeak does not actually exist within the main narrative of *1984*. With the sporadic, limited implementation of Newspeak throughout the novel, the new language is an occasional distraction to the modern English prose. Rather than force Newspeak into the narration of *1984*, Orwell wrote an appendix to the novel entitled “The Principles of Newspeak” in which he detailed three separate sets of vocabulary that account for every existing word in the language. It is worth noting that Orwell’s thorough explanation of Newspeak would be impossible to convey through the language itself, potentially justifying Orwell’s decision to separate the appendix from the plot of *1984*.

Orwell names the three vocabulary groups A, B, and C respectively. Words that fall under the A vocabulary are the basic words required for day-to-day activities. Simple nouns like dog and pot, as well as verbs like walk or hit remained, but “their meanings were far more rigidly defined.”¹² Many of these words could interchangeably be used for any part

of speech: noun, verb, adjective, or adverb. This simplification leads to many noun-verb hybrids. Orwell provides the example of *knife* which acts as both noun and verb, replacing the word *cut*.¹³ Words in the A vocabulary can also be negated through the prefix “un” or strengthened by the prefixes “plus and double plus.” No irregular verbs exist in Newspeak— all past tense verbs are modified by “-ed.” The addition of “-er” and “-est” accounts for the creation of all adjectives in the A vocabulary. Hypothetical tenses such as “would” and “should” are also absent from the A vocabulary.

The B vocabulary contains exclusively compound words created for the party’s political agenda. With appropriate alteration, these words could be used for any part of speech. Some irregular conjugations exist within the B vocabulary, but they are mostly proper nouns. Also unlike the A vocabulary, these political words have subtly complex meanings and inherent implications for fluent Newspeak practitioners. For example, Orwell explains: “All words grouping themselves round the concept of liberty and equality, for instance, were contained in the single word *crimethink*, while all words grouping themselves round the concepts of objectivity and rationalism were contained in the single word *oldthink*.”¹⁴ The specific titles of various party organizations also fall under the B vocabulary and all of them are hybrid abbreviations of complete labels. For example, *Recdep* became the official title of the Records Department, and similar abbreviations are applicable to all other party departments. Orwell created these catchy labels to emulate our own world: “Even in the early decades of the twentieth century, telescoped words and phrases have been one of the characteristic features of political language.”¹⁵ He cites the language of totalitarian regimes as the leading proponent of this technique. While these titles convey a concrete understanding for practitioners of Newspeak, they are not overly

complicated and thus do not invite significant contemplation or reflection. One could say the word *Recdep* and implicitly, almost subconsciously, understand the specific department, but not question why or how it possesses its title.

The C vocabulary is strictly scientific and technical terms. These words are not used in everyday speech because they have no place in common conversation, according to the Party. Rigidly defined, they are only applicable to the specific technical concepts that they represent. Often, only people in the field that utilizes certain technical words are privy to their definitions, or even their existence. Because each technical word is applicable to a specific field, it is unlikely that any one person would be aware of all of them. Instead, each technician possesses a small arsenal of technical terminology which he or she has no reason to share with others. Science as an encompassing form of knowledge ceases to exist. Orwell also asserts that the existence of science is unnecessary: “any meaning that [science] could possibly bear being already sufficiently covered by the word *Ingsoc*.”¹⁶

In order to understand the Orwell’s goals for the three vocabularies of Newspeak, one must be aware of Orwell’s own theories of rhetoric and political language. In many ways, Newspeak is a continuation of his complaints towards the realm of political English. If one were to distinguish the strongest deterministic tool of Newspeak, it would be reduction of available vocabulary. At first, Newspeak appears to be an utter contradiction of the qualities of English that Orwell critiques in his essay, “Politics and the English Language.”¹⁷ In general, Orwell claims that English, particularly in political writing, has become over-saturated with words of vague or no real meaning— literally too many words. The failure of political language is compounded as these words appear in succession, drowning any concrete statement or image in subjectivity, or even nonsense. Orwell

accuses long-winded academic and political writers of two distinct failings: “The first is a staleness of imagery; the other is lack of precision. The writer either has a meaning and cannot express it, or he inadvertently says something else, or he is almost indifferent as to whether his words mean anything or not.”¹⁸

Among the types of words or phrases that Orwell labels as chief sources of vagueness are “dying metaphors” and “meaningless words.” Orwell explains that dying metaphors provide an image intended to solidify a concept. However, dying metaphors are clichéd and archaic— they often relate to people, places, or occasions that are no longer relevant or understood by the communicator or the receiver. He provides the simple example of *Achilles’ heel*, a phrase popularly understood to mean “fatal weakness.” In order to understand the connection between image and concept, one must be familiar with Achilles and his tragic fall at the conclusion of *The Iliad*. While *The Iliad* might be one of the most important epics in human history, it is not unreasonable to assume that many people would be unfamiliar with Achilles. As the image source fades into obscurity, the dying metaphor persists and becomes equated with “fatal weakness” for no discernible reason. One can convey the concept to another without either party understanding why or how the metaphor has meaning. Orwell considers the tactic a lazy crutch for political writers that are too lazy or ill-equipped to create novel, relevant metaphors.

“Meaningless words” suffer from a plight similar to the “dying metaphors.” Rather than hinge on a waning image, meaningless words lack a stable foundational concept or visual grounding. According to Orwell, these words are completely subjective in meaning; therefore each person who utilizes the same empty word will have a different definition for that word. One example he provides is the word *democracy*: “In the case of a word like

democracy, not only is there no agreed definition, but the attempt to make one is resisted... when we call a country democratic we are praising it: consequently the defenders of every kind of regime claim that it is a democracy, and fear that they might have to stop using that word if it were tied down to any one meaning.”¹⁹ It would seem that the strength of the word stems from its flexibility— it can be molded to suit a variety of purposes.

Ideally, Newspeak would contain no meaningless words and no metaphors. The A vocabulary relies on specific, concrete images and actions relevant to normal daily activity, while the C vocabulary contains only specialized science terminology. The influence of meaningless words and empty metaphors emerge in the political terms of the B vocabulary— the words *blackwhite* and *Ingsoc* are perfect examples. In Goldstein’s book, Orwell explains:

[*Blackwhite*] has two mutually contradictory meanings. Applied to an opponent, it means the habit of impudently claiming that black is white in contradiction of the plain facts. Applied to a Party member, it means a loyal willingness to say that black is white when Party discipline demands this. But it means also the ability to *believe* that black is white, and forget that one has ever believed the contrary.²⁰

Notice that the meaning of *blackwhite* changes depending on the subject of its application— a trait similar to *democracy*. Is *blackwhite* a true empty word? No. It was designed by the Party for specific purposes and is more constrained as a consequence of that design. The word requires the metaphorical image of black and white as a foundation. The influence of an empty word schema exists in its flexibility to alternate between extremes depending on circumstance. Party members understand through *bellyfeel*, or intuition, that *blackwhite* constitutes a good Party trait, but negative when directed towards the opposition.

Ingsoc is a term that inspires a much broader range of meaning without the metaphorical foundation of an image. It barely resembles its predecessor, “English Socialism,” in sound or spelling. Also, the word socialism clearly falls under the category of empty words. All concepts considered good by Party members in the year 1984 can be attributed to *Ingsoc*. In this sense, “good” also entails every aspect of Party life. Many of these attributes are not explicitly stated and instead require a sense of blind Party faith to understand. *Ingsoc* has numerous connotations and is applicable to most situations, adjusted for the context of that situation. The Thought Police can arrest Party members for defying *Ingsoc*, allowing for an endless possibility of criminal offenses.

Orwell recognizes the potentially manipulative influence of metaphor as a tool of communication between two or more individuals. The metaphorical implications present in many of the B vocabulary words indicate that the most politically charged words in Newspeak require metaphorical grounding. He creates the word *bellyfeel* to describe this relationship. However, Orwell’s use of metaphor is incomplete. Eventually, the prevalence of “empty” relationships could cause Newspeak to unravel. The metaphorical grounds of the B vocabulary stem from modern English concepts— words that will no longer exist in Newspeak within a few generations. If linguistic determinism is a true concept in Oceania, then even the subconscious workings of *bellyfeel* will not be able to compensate for the references to words that have long ceased to exist. This inconsistency is apparent when analyzing Newspeak only through Orwell’s own views of metaphor, political language, and linguistic determinism. A more complete perspective of metaphor, proposed by George Lakoff and Mark Johnson, will reveal further flaws in Orwell’s deterministic language.

For a language that supposedly professes an absence of metaphor and utter reliance on objective understanding, Newspeak relies heavily on metaphorical representations, especially in the B vocabulary. More so than a literal presence of metaphors in the Newspeak vocabulary, the language also implicitly includes metaphor. Practitioners of Newspeak cannot understand their own language without relying on metaphorically-based conceptual systems. Some of these systems are unique to Newspeak, while others survived the transfer from *Oldspeak* to Newspeak. The disruption of metaphors prevalent from the older form of English has the greatest potential to undermine Newspeak because they are only a manifestation of the enduring conceptual foundations of perception.

The term *prolefeed* is part of the B vocabulary and describes the superficial and crude entertainment (books, movies, pornography) released in large quantities to satisfy and distract the proles from their impoverished lives. If *prolefeed* translates into “food for proles,” then it also implies the action of consumption. In modern English, or *Oldspeak*, this process can be described: “the proles consumed the provided entertainment.” The verb “consumed” means “to ingest” in the literal sense. Obviously, the proles are not eating their pornography. In *Oldspeak*, we reconcile and understand the meaning of “consume” related to entertainment as distinct from the consumption of food. Not only can we make this assumption, but our basic concept of consume provides a rich metaphorical foundation for the treatment of entertainment.

In their book, *Metaphors We Live By*, George Lakoff and Mark Johnson explore the various types of metaphors present in the English language. According to Lakoff and Johnson, the word *prolefeed* could exemplify an “Ontological Metaphor.” These metaphors rely on an object: “Understanding our experiences in terms of objects and substances

allows us to pick out parts of our experience and treat them as discrete entities or substance of a uniform kind. Once we can identify our experiences as entities... we can refer to them, categorize them, group them, and quantify them— and, by this means, reason about them.”²¹ They are often quick to point out common motifs that occur within a metaphorical category. One ontological motif is the metaphor “Ideas are Food.”²² While the trashy books and magazines are physical objects, they convey ideas that induce an experience in the reader. An erotica novel could have a juicy story. They even provide the example: “He *devoured* the book.”²³ Thus, the word *prolefeed* is a very direct representation of an “Ideas are Food” ontological metaphor.

Prolefeed exemplifies a written manifestation of metaphorical conception— one of many that Lakoff and Johnson expose and categorize. However, they have a grander goal for *Metaphors We Live By* than a series of lists. While a written or spoken metaphor can convey a notion from one person to another, the conceptual metaphor itself allows for internal understanding. Simply put, Lakoff and Johnson assert that people think in metaphor and that abstract concepts are difficult or impossible to grasp without a grounding in metaphor. What then, is the origin of essential metaphor? Culture. Lakoff and Johnson are adamant that the two are inseparable:

Cultural assumptions, values, and attitudes are not a conceptual overlay which we may or may not place upon experience as we choose. It would be more correct to say that all experience is cultural through and through, that we experience our ‘world’ in such a way that our culture is already present in the very experience itself.²⁴

Metaphors dictate experience and culture dictates metaphor. Lakoff and Johnson's assertions of the relationship between cultural metaphor and experience are similar and indicative of linguistic relativity. Cultural metaphors are thus a less intrusive. The two are distinguishable through their respective "primary building blocks." The basic unit of metaphor requires at least two words, but often more. Within the realm of linguistic determinism, the alteration or removal of a single word controls thought.

Assuming that Lakoff and Johnson's conclusions for cultural metaphor are completely, or at least partially correct, what are the implications for Newspeak? *Ingsoc* created the language and use it as an extension of their designed culture. It is important to distinguish that the implementation of Newspeak is not complete in Oceania in the year 1984 and older party members, such as Winston, were initially influenced by English culture. Not only do remnants of English culture survive in elderly proles and Party members, but Newspeak is derivative of modern English and thus, English culture.

Recall the two most prominent tactics of linguistic determinism utilized in the A and C vocabularies: the reduction of total words and the rigid, objective definitions of remaining words. Within these truncated lists exist many essential words that are probably not as "objective" as *Ingsoc* intended. Two examples of critical words include "time" and "good." According to Lakoff and Johnson's breakdown, both of these concepts require structural and orientational metaphors to facilitate comprehension in modern English. They are intangible abstract. English and culture concurrently developed metaphorical strategies that allow people to understand and communicate "good" and "time."

Lakoff and Johnson ascribe structural metaphor to time. They describe structural metaphor as "cases where one concept is metaphorically structured in terms of another."²⁵

What does it mean to have time? How do we approach this question? Lakoff and Johnson provide three structural metaphors that indicate how cultural English answers these questions. They include:

Time is Money

Time is a Limited Resource

Time is a Valuable Commodity²⁶

The theme unifying these three metaphors is “time should not be wasted.” Lakoff and Johnson claim that this theme for time arose in industrialized societies as a consequence of the connection between labor and work: “we *act* as if time is a valuable commodity— a limited resource, even money— we *conceive of* time that way.”²⁷ The approach to time within *Ingsoc* contradicts these metaphors.

In the early pages of *1984*, Orwell implies that the culture of *Ingsoc* is already damaging the concept of time. Winston struggles to recall the date or his age, admitting to himself: “it was never possible nowadays to pin down any date within a year or two.”²⁸ As a profession, Winston revises historical dates and facts, destroying timely, logical progressions of events. *Ingsoc’s* “socialist” approach to labor also undermines the “time is money/valuable/limited” metaphor because many professions follow the logic of “work for the sake of work,” not “work for the sake of profit.” Winston spends his days at *Recdep* making arbitrary alterations to stories, many of which have already been altered. Orwell also explains the useless expenditure of resources in war: “The problem was how to keep the wheels of industry turning without increasing the real wealth of the world. Goods must be produced, but they need not be distributed. And in practice the only way of achieving this was by continuous warfare.”²⁹ Culturally, labor is not precious; it does not yield

essential results. The time spent laboring need not be efficient— it must only occupy time. As stated previously, endless date revisions undermine any point of reference for time. Lakoff and Johnson also posit the metaphor of “Time as a Field,” which accounts for phrases such as “passing through time.” The pointless utilization of labor over time conflicts with metaphorical quantification of time. Even before the implementation of Newspeak, *Ingsoc* culture is incompatible with English metaphor. Because metaphor is not supposed to be present in Newspeak, it is a logical assumption that phrases used to quantify and visualize time.

If time is present in the A vocabulary, then *Ingsoc* has recognized that it is required for daily tasks. Without metaphorical context, time can only be represented by the changing of numbers on a clock. In the case of Winston and other adult party members, the metaphorical experience of “time” is still relevant. Winston’s life becomes disorienting and mundane because his external environment does not permit him to utilize the rich, culture-founded metaphors of his youth. The gradual implementation of Newspeak

In the years since Lakoff and Johnson first revealed their “Conceptual Metaphor Theory,” other cognitive linguists and psychologists have used the CMT pretext for their own research. An experiment conducted in 2012 utilized functional magnetic resonance imaging (fMRI) to measure brain changes in response to sensory metaphor.³⁰ Participants in the study listened to series of sentences containing a texture metaphors (She had a rough day). They also listened to control sentences that conveyed the same meaning as their paired metaphors, but without using metaphorical phrasing (She had a bad day). The fMRI images indicated activation in somatosensory texture-selective areas, but no varied activation in language, visual, or bisensory texture-selective areas. There was also no

distinction between activation of classical language areas caused by the metaphor compared to the control.

This study provides strong evidence to support the Conceptual Metaphor Theory. Because the sensory metaphor sentence activated all the same areas as the control sentence, superficial understanding was consistent between the two. The additional activation of texture-specific areas induced by the texture metaphor implies that the sentence induced an experience akin to the sensation of touching the literal texture. The metaphor elevates the sentence beyond instigating a casual understanding of words; it becomes the origin of a vivid experience grounded in perception. Other studies provide similar evidence for Conceptual Metaphor Theory. A series of seven studies conducted at the University of Rochester suggest: “the cognitive representation of anger is systematically related to the cognitive representation of heat.”³¹ Literally, anger lives up to the metaphor of “hot-headed” within our perception as English speakers.

If we were to translate the sentence example provided in the first experiment (She had a rough day) into Newspeak, it might become “She had an ungood day.” The literal implication of the Newspeak sentence is, in general, a weaker message than the modern English equivalent. Metaphorical grounding also extends beyond textual sensations: “Cognitive linguistic studies have proposed that many of the source domain within conceptual metaphors are grounded in recurring patterns of bodily activity and experience.”³² Newspeak is incapable of utilizing any of the sensory connections integral to metaphorical understanding. Party members perceive sensations such as touch and smell, but Newspeak does not utilize those sensations for metaphorical grounding. Metaphorical grounding is not unique to English and can be found in numerous other world languages.³³

The widespread prevalence of these metaphors implies that they are integral for effective communication and sympathetic understanding between conversing persons. In the case of the texture metaphor, the use of the word “rough” added an additional layer of cognitive processing to the standard language activation. The exclusion of sensory and other metaphors from Newspeak places the language at a significant disadvantage to modern English and other world languages. Newspeak denies the richness of experience attributed to sensation and prevents communicating parties from conveying or receiving conversation that is not superficial or contextually hollow. Party members literally have less opportunity and capacity to connect with each other.

Other tactics in Newspeak utilize specific linguistic hypotheses in conjunction with determinism. For example, Orwell’s simplified method of negation is consistent with a concept that Lakoff refers to as “negative transportation.”³⁴ This concept describes the direct correlation between the literal space separating a subject from its negative modifier and the implied strength of the negation. For example:

I am unsatisfied.

I am not satisfied.

In the first sentence, the negative modifier is physically closer to its target, actually attaching itself to the target. The second sentence displays a greater physical separation within the sentence. The negative implication of the second sentence appears less than the first. An example of a far-reaching negative modifier would be:

I wouldn’t be satisfied.

Two words separate satisfied from the negative modifier, and the resulting sentence is the weakest yet. Orwell sought to remove subjectivity from language, forcing Party members to

speak in absolutes, or near-absolutes. By simplifying all negations to the prefix “-un,” he creates the strongest possible negative through the closest possible proximity. Assuming the linguistic determinism holds true, the proximity of negative modifiers in Newspeak leads to the perception of only the most intense negation of a verb, adjective, or noun. The concept of “negative transportation” applied to linguistic determinism suggests that Party members in Oceania are only capable of approaching life through absolutes. However, it is worth mentioning that negating a positive (ungood), regardless of the strength of the negation, is distinct in definition from an actual negative (bad). Orwell’s style of negation could be one example of successful linguistic determinism because it limits the overall range of words and forces speakers to adhere to the strict definitions of words that remain, along with the negations of those remaining words.

Perhaps the most iconic word from the entire Newspeak vocabulary is *doublethink*. It constitutes how party members are supposed to process information, reiterate party agendas, even live their lives. Orwell describes *doublethink*:

Doublethink means the power of holding two contradictory beliefs in one’s mind simultaneously, and accepting both of them... The process has to be conscious, or it would not be carried out with sufficient precision, but it also has to be unconscious, or it would bring with it a feeling of falsity and hence of guilt... To tell deliberate lies while genuinely believing in them... to deny the existence of objective reality and all the while take account of the reality which one denies— all this is indispensably necessary.³⁵

The largest indicator of Orwell’s attempt at linguistic determinism through *doublethink* is the profession that the process must be both ‘conscious’ and ‘unconscious.’ This concept

can be applied to the verbal declarations made by the Party and also to the written alterations made to public records. Winston's job with *Recdep* is the generation of *doublethink* on the page. One of the first, simplest examples is the rationing of chocolate: "The Ministry of Plenty had issued a promise... that there would be no ration during 1984. Actually, as Winston was aware, the chocolate ration was to be reduced from thirty grams to twenty at the end of the present week."³⁶ Through awareness, Winston is practicing the first half of *doublethink*. However, he does not accept the contradiction, consciously or unconsciously, and instead declares it fallacious.

Early in the novel, Orwell establishes that Winston is resilient to *doublethink*. After his torturous stay at the Ministry of Love, Winston changes. With the final page of the novel, Orwell implies that O'Brien has successfully conditioned Winston to utilize *doublethink*: "But it was all right, everything was all right, the struggle was finished. He had won the victory over himself. He loved Big Brother."³⁷ By achieving "victory over himself," Winston is purging all of the faults of *Ingsoc* that he previously could not ignore. Is it a reasonable expectation that Winston ever be capable of actively adopting, or passively being conditioned to practice *doublethink*? Can a person reject their former mode of thought processing? Is it even possible to unconsciously accept erroneous statements, or even shift ones unconscious recollection of the "correct" history? Many psychological case studies would argue not.

A number of case studies investigating how people respond to true and false written statements have been completed in the last few decades, especially as the ability to measure neural processing has improved. One study conducted in 2012 explored the relationship between a reader's prior knowledge and the evaluation of truth: "The decisive

question of this study is whether sentence-related factual world knowledge that is stored in long-term memory also becomes automatically activated upon reading and understanding the sentence, and whether this knowledge is used to evaluate the truth status of the respective sentence.”³⁸ Results from the experiment suggest that when a person reads a sentence, they “automatically” activate information from long-term memory to aid in comprehension of the sentence and affirmation of semantic consistency. However, the utilization of other long-term memories to qualify a statement as ‘true’ or ‘false’ is not always automatic. The validation of truth is goal-oriented, and thus must be prompted. For people who are aware that they must determine truth, the validation *does* become automatic.

In another study conducted by David Rapp in 2007, experiments were designed to measure the impact of reader prior knowledge on their response to false statements on a moment-by-moment basis. The first study of the experiment indicated: “participants overall exhibited reading slowdowns when stories contained inaccurate historical outcomes.”³⁹ At least within the first study, these ‘inaccurate historical outcomes’ were obvious because they naturally invoked reader historical knowledge. The second study had similar results: “prior knowledge use was encouraged with a preactivation task preceding each story. The pattern of reading latencies resembled that for Experiment 1.”⁴⁰ Even in cases where readers were less apt to naturally utilize prior knowledge of historical truth to evaluate a sentence, a simple cue generated the same slowness effect. Conversely, the final experiment suggested that in situations where readers had no prior topic knowledge, their speed of reading was unaffected by false passages. Results from this experiment suggest that readers consciously recognize and qualify false statements when they have prior

knowledge of the truth. If the prior knowledge is strong enough, it disrupts and alerts readers to false statements even without prompting.

The two studies portray different perspectives of truth qualification. The 2012 study suggests that unprompted recognition of truth is not automatic. However, it can become an automatic process if the reader is prompted to identify truth before reading the passage.. Rapp's indicates that when prior knowledge conflicts with sentence content, comprehension or evaluation of that content slows. An interesting distinction is the reliance on priming apparent in the 2012 study, but unnecessary for Rapp's conclusions. Results from these studies provide insight into the potential success or failure of *doublethink* as an imposable system of perception.

As stated previously, *doublethink* requires unconscious and conscious participation from Party members. If not prompted to evaluate historical, lexical, or logical correctness, a Party member will automatically process the mere meaning of a statement. However, they must be prompted for truth evaluation to become automatic. This prompting implies a conscious relationship between a Party member and his/her ascribing of truth to a new concept, regardless of whether that concept is true or not.

Rapp's study explains that in passages that clearly oppose reader knowledge, the reader slows reading speed in recognition of the disparity. This situation would not be an uncommon occurrence for a Party member. Winston experiences and perpetuates the altering of historical truth everyday at *Recdep*. The earlier example of sugar rationing is only one example of the written historical inconsistencies that Party members read each day. Rapp's experiment suggests that when Winston reads the new truth: 'the chocolate ration will be decreased from thirty grams to twenty,' he will take longer to read the

sentence because it contradicts his established knowledge that the chocolate ration be fixed for the entire year. Rapp's findings also indicate that Party members not as familiar with *Ingsoc's* chocolate promises would be less likely to hesitate because they lack a strong prevalence of prior knowledge. All in all, this interaction is inseparable from conscious perception.

The level of conscious perception, interpretation, and priming indicated by both studies implies that Party members, especially older members with strong prior knowledge, will always have some conscious element interacting with perception of truth. It would also be difficult to consciously believe in contradictory ideas because one will always exist as a negation to a prior knowledge. *doublethink* beliefs cannot be consciously equivalent in the face of prior knowledge, nor can they unconsciously be prescribed as true or false. Of course, party members can still consciously practice *doublethink*, but this implies that *doublethink* is not unconsciously influencing perception.

Doublethink is also incompatible with the Cognitive Dissonance Hypothesis. Donald Auster, one of the many researchers whose research supports the hypothesis, described Cognitive Dissonance as such:

[Cognitive Dissonance's] pertinent features are based on the simple and well-established fact that an individual strives for consistency within himself. His opinions and attitudes tend to exist in clusters that are internally consistent. The presence of dissonance gives rise to pressures to reduce or eliminate dissonance. This occurs because dissonance among cognitive elements is psychologically uncomfortable, which in itself motivates the individual to reduce the dissonance and achieve consonance.⁴¹

A disturbed mind placates itself by evaluating two conflicting concepts and making one subservient to the other— one becomes true, the other false. This psychological tactic is a direct opposite to *doublethink*. Orwell's tactic derives peace from maintaining equal beliefs in multiple opposing concepts. It would be unreasonable to assume that years of language manipulation and *doublethink* could shift human tendency away from cognitive dissonance. A study conducted in 2010 identified certain behaviors performed by primates as attempts to reconcile cognitive dissonance.⁴² If the necessity to assuage cognitive dissonance arises without sophisticated language, it cannot be removed from human instinct by implementing the verbal system of *doublethink*. Orwell's pillar for Newspeak cannot become an unconscious, automated process.

Orwell's attempt at linguistic determinism crumbles with the failure of *doublethink*. For example, without true *doublethink* it is unlikely that *thoughtcrime* will ever cease to exist among Party members. Thought Police will always be necessary to impose law. In naturally processing opposing sources of information, Party members unconsciously fall into *thoughtcrime* by processing historical discrepancies and then consciously commit *thoughtcrime* through evaluation of those discrepancies. If the lifestyle and thought processing inspired by *doublethink* must be imposed and maintained by an outside force, then it is a failure as a self-sustaining example of linguistic determinism and undermines many other aspects of Newspeak.

In a brief article entitled "Thoughtcrime," William Knopp articulates an inconsistency between Newspeak and its intended purpose of linguistic determinism. Knopp operates under the assumption that linguistic determinism is possible and occurring among practitioners of Newspeak. He finds this premise problematic when

applied to the B vocabulary. He claims that with the A and C vocabularies established: “all that would be necessary for the users of the ‘B’ vocabulary to do in order that *no thoughtcrime* would ever again occur is not to pass on their language to any other persons.”⁴³ If *Ingsoc’s* ultimate goal with the A and C vocabulary is to diminish and eventually eliminate any instances of *thoughtcrime*, then why allow the existence of words used to describe criminal act? Only those with knowledge of the B vocabulary, *thoughtcrime* specifically, will be capable of committing said crime.

Knopp also makes the practical observation that the existence and power of the Thought Police proves that *thoughtcrime* is anticipated.⁴⁴ People higher up in the party—the people most responsible for defining *thoughtcrime*—assume that *thoughtcrime* is impossible to eradicate. As a potential compromise to these inconsistencies, Knopp proffers the idea that *thoughtcrime* must exist in Oceania because a state must “maintain order” to be a state.⁴⁵ Without *thoughtcrime* and no laws to enact, a state is unnecessary and cannot exist. Knopp touches on an interesting conclusion about the relationship between normal Party members and the Inner Party members, but he stops short of realizing it. It is possible that the Inner Party realizes that *Ingsoc* and Newspeak are not systems that can maintain themselves.

As explained previously, the ineffective tactic of *doublethink* condemns all Party members to a life of *thoughtcrime* because human processing of conflicting facts relies on both conscious and unconscious recognition of inequality. The ability to unconsciously accept two contradictory statements becomes impossible because it is incompatible with the actual method in which the brain approaches those statements. If Party members cannot passively avoid *thoughtcrime* through the deterministic tactic of *doublethink*, they

must actively avoid *thoughtcrime* and consciously reason that two opposing events could both occur. Maintaining such a lifestyle requires rigorous mental fortitude and an external force to instigate that mental regimen. Because consciously practicing *doublethink* is an addition to the stressful state of cognitive dissonance, a person would not choose *doublethink* without good reason. For Party members, that reason is fear. The Thought Police, public executions, and vaporization are all classic tactics of subjugation utilized by a totalitarian regime.

Even assuming that every Party member never sticks a single toe out of line, a higher authority would still be necessary to hold Oceania together. If Newspeak somehow became the dominant language by 2050, as intended by *Ingsoc*, communication and thought would be too stunted to maintain a large, organized society. Even before the implementation of Newspeak, the socialist/ totalitarian culture of *Ingsoc* undermined essential conceptual metaphors such as “Time is Money/ a Valuable Resource.” Cultures and metaphors have been evolving for hundreds of years, with reciprocating influences on each other, but *Ingsoc* snuffs that evolution. No culturally relevant metaphor for time will arise if Newspeak adheres to Orwell’s design. The only novel metaphors in Newspeak exist in the B vocabulary and they all serve a specific political agenda, such as *blackwhite* and *prolfeed*. Other metaphorical words from the B vocabulary connect to modern English words that will no longer exist when Newspeak is fully implemented.

The ultimate lack of metaphor leaves Party members incapable of communicating abstract concepts and, if linguistic determinism is true, they will also have very poor grasp of those concepts. Intangible, but essential concepts such as time, ideas (ideas are food/ plants), even life (life is a container/ gambling game) would be difficult to appreciate.⁴⁶

Arguably, the concept of “idea” might have been excluded from Newspeak, being another word covered by *Ingsoc*. Phrases like “to be full of life” or “the odds are against me”⁴⁷ would be lost to Party members. It is likely that the only conceptualization of life would be the opposite of death. Life loses its flavor and in turn Party members could be less capable of treasuring their individuality and existence. In this regard, Big Brother would probably be satisfied with the complacent hoard of drones. But, if every single party member were to lack these fundamental conceptual systems would they have enough momentum to keep society running?

It’s difficult to conceptualize a society scraping along through routine labor and a bare-minimum of resources, maintaining itself through Newspeak communication alone. What if a plague were to disturb this society, or some other natural disaster? Doctors and scientists would have a severely limited capacity to respond to the crisis because they lack the technical terminologies to approach a foreign scientific adversary. The lack of positional and spatial metaphor could inhibit a scientist’s potential for spatial reasoning. Even the creation of fresh ideas to confront the disaster would be compromised by Newspeak. In order to keep the Party from crumbling at the first sign of stress, an organized external group, like the thought police or Inner Party, must guide the entire Party through adversity.

The foundation of Newspeak, *doublethink*, is an impossible practice and requires an aggressive enforcer to remain relevant. The limitations of Newspeak leave society crippled and inept, again requiring the close monitoring of a third party. Not only does Newspeak fail to completely determine the thoughts of Party members, it damages society enough that any disturbance could have devastating consequences. In designing a deterministic

and limited language, the Inner Party and Big Brother create a civilization without integrity— a body of laborers incapable of caring for themselves, but also psychologically predisposed to minor insurrections. If Knopp is correct and the Thought Police must exist in order to preserve Oceania's status as a "state," then the failure of *doublethink* and *thoughtcrime* is irrelevant. However, because of the weaknesses inherent in the rest of Newspeak, the Inner Party and Thought Police consign themselves to actively organize and protect the wretched and stunted Outer Party population. Their responsibilities extend beyond dishing out punishment. Newspeak might have made the masses easier to subjugate, but it also made them susceptible to collapse. There can be no state if the populace crumbles.

Recalling Orwell's animosity for Ogden's "Basic English," the failure of Newspeak to function as a language is inevitable. If Newspeak is Orwell's parody of an inadequate language, then Newspeak couldn't possibly constitute a successful language. It stifles perceptive experience, but also fails to control *crimethink*. With his language, Orwell is able to expose readers to linguistic techniques that he finds particularly hazardous while condemning their practice.

Linguistic Relativity in *Riddley Walker*

Unlike Orwell's sparse inclusion of Newspeak throughout *1984*, Russell Hoban narrates *Riddley Walker* in a unique form of English to match the post-apocalyptic society detailed in the story. Set thousands of years after nuclear war ravaged the Earth, *Riddley Walker* immerses readers in a society grounded by mythical histories and superstition. The culture and language Hoban constructs provides his realistic representation of how humanity would respond to nuclear decimation— a war referred to as the *1 big 1* by the people of Riddley's time. Rather than Orwell's meticulously calculated Newspeak, the language of *Riddley Walker* arose through a different process: "Although Hoban claims that the language in *Riddley Walker* does not follow a consciously devised system, he does believe that the dialect contributes significantly— that it is, in fact 'one of the protagonists of the story'."⁴⁸ In other words, Hoban had no grand scheme for Riddley's language; he allows it to grow organically from circumstance and instinct. As a result, the language could be considered a "gut" estimation of appropriate post-apocalyptic English. Because Hoban was a master of the intricacies of Riddley's society, the language could flow naturally from Hoban's understanding of the fictional world, and thus become a unique manifestation of that world. Just as Riddley is a product of his environment, so is the language he speaks.

At first impression, Riddley's language invites readers to compare it to modern English because it reads like a phoenetic, juvenile derivative of modern English; "the language, though nonstandard, is decipherable."⁴⁹ Compared to straight sentences of Newspeak, Riddley's language is extremely familiar and intuitive. The disparity between modern and Riddley English forces readers to ask the question: What has happened to

society in the years following nuclear war to allow for this “degeneration” of language? More importantly, we must ask: In what direction is this society moving?

There are actually three different forms of English represented in the novel. In the recollection of two of the myths, Hoban reverts to a form of English that Riddley understands as historically indicative of the times when each myth was recorded. *The Legend of St Eustace* represents modern English from 1980 and *The Eusa Story* which Riddley refers to as *old spel*. Supposedly, these are historical spellings: “Befor I get to that I bes write out the *Eusa Story* the same as it ben wrote out 1st and past on down to us. Its all ways wrote down in the old spel.”⁵⁰ The spellings of *old spel* appear more phoenetic and degenerate than Riddley’s own spelling, but he believes it is genuine. With *old spel*, Hoban reminds readers that the written word can be retrospectively corrupted in a mostly illiterate society like Riddley’s. Written records are not infallible. The final English represented in the novel is Riddley’s own spelling, constituting 80,015 words.⁵¹

The disparity between the 1980 modern English and *old spel* represents the distortion of history across thousands of years of oral histories. After reading *The Legend of St Eustace*, Riddley remarks: “ I don even know ½ these words. Whats a Legend? How dyou even say a guvner S with a littl t?”⁵² Riddley has a better grasp of *old spel*, a version of English that likely never existed, than actual modern English. This disparity represents the bias of Riddley’s present state towards his expectations for the past. With little to no written histories maintained from before the war, the distorted oral traditions were recorded in a manner that people *believed* was indicative of the past.

Riddley also is unfamiliar with the word “legend.” This ignorance implies that Riddley’s society does not approach stories as historical sources of fiction. Over the years,

legends became religious historical fact. The omission of the word “legend” from normal vocabulary makes sense in light of Riddley’s society. They do not assume that an extended tale from the past would be fictitious; instead, they treat it as at least partially indicative of historical fact. From the perspective of linguistic relativity, Riddley and his peers are more likely to find pieces of truth in the stories they hear. This predisposition makes them more receptive to the parables of “Eusa Shows.” These events are live puppet show performances that act as continuations to the *Eusa Story*.

While the *Eusa Story* still exists in written form, The Eusa Shows are not bound to recorded history. Two men orchestrate each new Eusa Show: “Abel Goodparley & Erny Orfing the Big 2 the Pry Mincer & the Wes Mincer.”⁵³ Each show need not relate directly to another, or follow the precedent of previous performances, but they must all respect their foundational text: the *Eusa Story*. The Eusa Shows act similarly to parables; through a performance Goodparley and Orfing can suggest moral and societal lessons, or further their own political agendas. Thus, the historical implications of each Eusa Show are subject to the motives of two men.

A characteristic of Standard English that survived thousands of years beyond the nuclear holocaust is the capitalization of proper nouns. Although society is largely illiterate, Hoban implies that most people understand that capitalization is significant. During a Eusa Show, Eusa says the words “Good Time” and Mr. Clevver responds, “Eusa did I hear you say Good Time with a guvner G and a guvner T?”⁵⁴ Hoban could be implying that capitalized proper nouns sound distinct from normal nouns. Regardless, the Eusa Show is a public performance, indicating that the audience understands the implications of *guvner* letters. Riddley’s society also uses *guvner* to indicate a person of power, or “governor.” In

Riddleyspeak, the words *Truth*, *Power*, and *Luck* always begin with *guvner* letters. Mullen suggests that these words “seem to name elemental forces in nature or the human psyche.”⁵⁵ Because these words are capitalized, they become proper nouns. Generally, proper nouns refer to more specific information than common nouns.⁵⁶ However, proper nouns in Standard English often refer to specific places, people, or organizations. *Truth*, *Power*, and *Luck* are all abstractions. The *gunver* letter might make these three concepts more specific in that they become more autonomous, as Mullen would suggest.

In Riddley’s society, the connotation of the word *connexion* carries more impact than “connection” in Standard English. *Connexion men* find links between real-world events, Eusa Shows, and even words. There is also a *tel woman* in charge of the *reveal*. The day that Riddley’s father dies, a woman delivers a stillborn baby. In response, the men ask if there is a *connexion*.⁵⁷ Because they all perceive *Truth* or *Luck* as individual forces interacting with human lives, coincidences such as the paired deaths of Riddley’s father and the infant could be indicative of an outside force. *Connexions* urge people like Riddley to stretch their understanding and creativity to find some *Truth* or *Luck*. Because *connexions* are applicable to language as well as experience, many of Riddley’s interesting linguistic phrases come from *connexion’s* influence.

Taking the place of his dead father, Riddley acts as the *connexion man* and interprets each show for the audience. Riddley aims to forge his own style of *connexions*:

I had in mynd to take it slow and make it solid. Put 1 thot to a nother like ring
poals in poal hoals and holders to ring poals and faters to holders and the
reveal on top of it all like thatch. So you cud all ways go back from the reveal

and get a good look at how the woal thing ben bilt and that wer going to be the Riddley Walker styl.⁵⁸

Riddley intends every revelation to follow the logic of its predecessor or reveal some piece to a larger whole. His explanation is a grandiose rendition of the *Theories/Arguments are Buildings* metaphor.⁵⁹ By piecing together each physical components of a building, Riddley conveys the intricate, extended procedure for his future *connexions*. He wants readers to understand not only *that* he will build his *connexion* story, but *how* he will accomplish it. Riddley also accentuates the “building process” with rhyming repetition. The image “ring poals in poal hoals and holders to ring poals and fasters to holders” connects each object through both description and sound. In his review of rhyme and cognitive poetics, Reuven Tsur describes relationship as a sort of “harmonious fusion:” “Rhyming units are perceived as closely knit together, even though they may be rather spread out in time.”⁶⁰ Both the metaphor and the rhyme indicate the importance of coherence and logical progression for Riddley’s perspective of himself and his world. Specifically, they display his predisposition to make *connexions* where he can find them.

One of the greatest influences on the language, lore, and culture in *Riddley Walker* is the divide between present and past. Both linguistically and politically, there exists a struggle to reclaim what has been lost. Goodparley epitomizes this compulsion when he tells Riddley, “Riddley we aint as good as them befor us. Weve come way way down from what they ben time back way back.”⁶¹ Working computers have not existed for thousands of years, yet technological words permeate Riddley’s language. Legends such as the *Eusa Story* attribute incredible power to numbers and equations, but Riddley’s society cannot possibly conceive the actual implementation of numerical code as we understand it in

modern science. Attempts to reconcile an incomplete understanding of technology and mathematics appear through the use of tech-based metaphor and the rationalization of legend.

The numbers present in Riddley's spelling indicate the prevalence of "literal interpretation" in his language. Without exception, numerical symbols replace the words used to represent numerical values. Whenever the simple number appears in the text, it is always symbolically represented (1, 2, 3). These symbols also appear alongside text in the case of compound words, such as: *10wts, any 1, and 2ce*. In the case of *Salt 4*, the number incorrectly replaces its phonetic equivalent "fer." While they might seem unfamiliar to readers, with a minimal amount of reasoning, their meaning is intuitive. In the early days of linguistic analysis, a study conducted by Miles Tinker at the University of Minnesota measured the time necessary to perceive a symbolic number (1, 2) compared to the perception time of a spelled-out number (one, two). In all cases, the symbolic number was recognized first.⁶² In a society with dwindling literacy rates, the simplest and most accessible representation of a number will likely become most popular for use. While the number-hybrid words may seem juvenile to our modern-English eyes, they are still easily perceptible. Common words in modern "text talk" such as "u" or "b4" exemplify the popularity of symbol use to convey meaning. The symbol is simply more accessible and evocative of meaning than the corresponding word.

As indicated by the word *Salt 4* not all numerical symbols correctly pair with a quantifiable concept. Riddley uses both number/numbers and *No./Nos.* throughout his narration and they have very different connotations. Hoban does not distinguish whether these two words share the same pronunciation, or the word *Nos.* is pronounced "nos." The

distinction between the two versions of “number” is apparent through their appearances in historical legend. In Lorna’s story, *Why the Dog Wont Show Its Eyes*, numbers represent everything in the world: “They had machines et numbers up. They fed them numbers and they fractiont out the Power of things. They had the Nos. of the rain bow and the Power of the air all workit out with counting which is how they got boats in the air and picters on the wind. Counting clevverness is what it wer.”⁶³ The *Eusa Story*, Eusa rips apart the Littl Shynin Man and discovers the *Master Chaynjis*. He records the *Nos.* of the *Master Chaynjis* and puts them into the Power Ring to create the 1 Big 1.⁶⁴ Lorna’s story implies that everything in the natural world has its own set of “numbers.” Through a machine, these numbers can be converted into *Nos.* that allow the manipulation of nature. In the *Eusa Story*, the *Nos.* are the summation of “everything.” Because Riddley’s society is mathematically limited, they do not understand that machines *derive* numbers through calculation. Instead, the *Nos. appear* from the world through observation and, once input into the Power Ring, they can control everything.

Following the cultural precedent of *Why the Dog Wont Show Its Eyes*, Riddley uses *numbers* as a metaphor for essence. Riddley ponders the dog that escorted him through the wastes: “I thot his name myt be a fraction of the nite or the numbers of the black wind or the hisper of the rain.”⁶⁵ Numbers and fraction are akin to the life or spirit of the natural forces they represent. Because Riddley personifies the rain with *hisper*, meaning “whisper,” it follows that fraction and number would represent some “living” quality. In the story *The Bloak as got on Top of Aunty*, Riddley describes the bloak: “He wer so much out of Luck his numbers all gone randem and his progam come unstuck.”⁶⁶ In this example, the numbers

represent logic and *progam* has the same connotation. It would appear that as a metaphorical device, “numbers” indicate personality or consciousness.

The word *Nos.* serves a different purpose. They equate to scientific understanding. *Nos.* often appears in conjunction with the *1 Big 1* and *Master Chaynjis*. After the detonation of the *1 Littl 1* using the *Salt 4*, Riddley asks Orfing: “Did they ever get to the knowing of the mixer of the *1 Littl 1*?” Orfing responds: “they cudnt littl down to the *Nos.* of it.”⁶⁷ The *knowing* refers to an understanding and the “*Nos.* of it” refers to the chemical reaction that caused the explosion.

As one of the *greedy mints* for the *1 Big 1*, the “4” in *Salt 4* could represent one of the *Nos.* of the *Master Chaynjis*. While the symbolic numerical representation may be more accessible than word representation, comprehension of symbolic numbers is still challenging for an illiterate society. Research conducted by Samar Zebian and Daniel Ansari in 2011 investigated comprehension of symbolic and nonsymbolic numerical representations by literate and illiterate people. Results suggested that both groups were equally capable of recognizing the magnitude of nonsymbolic numbers because they could all easily distinguish a large group of squares from a small group of squares. For symbolic comparisons of magnitude, participants decided the larger of two number symbols. For example: which is larger, 4 or 8? Less literate participants took longer to answer and were less accurate.⁶⁸ Most of Riddley’s peers are illiterate and Riddley’s literacy level is likely less than a reader today. The incorrect presence of numbers in words like *Salt 4* and the attribution of special “natural power” to *Nos.* reflects the conceptual abilities of Riddley’s society. However, the added connotations to *Nos.* how people metaphorically ground sciences such as chemistry that are well-beyond their capacity to understand.

Another peculiar addition to Riddley's language is the presence of "technological" words. These words arise in normal conversation and make no reference to their "actual" modern English definitions. R.D. Mullen labels this facet of Riddley's language as "Computerese" and it constitutes a series of metaphors that are familiar to modern English readers, but have very different implications within the Riddley's world. The words *blip* and *program* are two of the most commonly recurring technological metaphors. At one point, Riddley describes a compulsion as: "It wer like I jus ben programmit to go there and get him out."⁶⁹ Riddley uses a metaphor that is culturally relevant to modern English. We understand a programmer as a person who inputs computer codes in order to achieve a certain response from that computer. To "feel programmed" is to experience the influence of an outside authority on decision-making processes. This metaphor is congruent with one of Lakoff and Johnson's proposed metaphor motifs: *The Mind is a Machine*.⁷⁰ When Riddley uses the program metaphor, he correctly conveys a concept for compulsion, but misses the cultural foundation for the metaphor. For him, the "programmer" might directly correlate to a mystical force and not the image of a computer programmer. In this case, the metaphorical grounding shifts based on the cultural background of the speaker, but the meaning remains constant.

The Mind is a Machine metaphor is one of the most prominent metaphors in Riddley's culture, despite their ignorance of computers and most other technologies. The machine metaphor also acts as an extension to *The Mind as a Container*. In Goodparley and Orfing's Eusa Show, Eusa complains that his head is too full: "Wel you see I cant jus keap this knowing in my head Ive got things to do with it Ive got to work it a roun. Ive got to work the E qwations and the low cations Ive got to comb the nations of it. Which I cant do

all that oansome in my head that's why I nead this box its going to do the hevvy head work for my new projeck."⁷¹ Eusa then runs wires from his head to a metal box that he calls his *No. 2 Head*, but he claims to have the *master program* in his *regler hed*. Ultimately, all of Eusa's *knowing* transfers to the metal box and Eusa loses his memories. Rather than Eusa's head functioning *like* a computer, it is the same as a computer. Similarly, memories are not *like* data— they are one and the same thing: knowing. Eusa describes his thought processes as working the *E qwations* and *low cations*, which also implies that his knowing is numerical data. Thus, Eusa's mind is a container akin to a computer that holds and processes data. The plot of the Eusa Show is a literal manifestation of this metaphor. In general, the use of numbers and tech-based metaphor reflects a language grounded in the lost concepts of the past.

The few homophones and homonyms present in Riddley's vocabulary are pivotal to the many of *connexions* he concludes throughout his travels. A homophone is a word that shares the same sound as another word, but differs in both spelling and definition from that word, (sail, sale).⁷² Homonyms are words identical in both sound and spelling, differing only by definition, (bat the animal, bat the object).⁷³ One words group from Riddleyspeak that illustrates both homophone and homonym is *wood/wud/Wud*. *Wood* refers to a piece of wood, *wud* refers to "would," and *Wud* derives from the *Hart of the Wud* from the *Eusa Story*. The *Hart of the Wud* is a stag in the center of the forest where Eusa finds the Littl Shynin Man. The addition of *hart* is a further complication that Riddley must explain:

There is the Hart of the Wood in the *Eusa Story* that wer a stag every 1 knows that. There is the hart of the wood meaning the veryes deap of it thats a nother thing. There is the hart of the wood where they bern the chard coal thats a nother

thing agen innit. Thats a nother thing. Berning the chard coal in the hart of the wood.⁷⁴

Thus, *hart* can indicate “stag,” “hearth,” or “heart.” The passage indicates that Riddley uses the heart-form of *hart* metaphorically, but he also uses the literal definition: “he cookt the hart of the chyld and et it.”⁷⁵ The relationship between each of these three connotations could be stronger for Riddley than a speaker of Standard English because he uses a single word for all three concepts, while Standard English uses three separate words.

Research on homophones conducted by Russell Foote in 1970 explored the general ambiguity of homophones. Participants in his experiment listened to various homophones and responded to each word with a related word. The increased time required to respond and the larger variation of response compared to the non-homophone control suggested that homophones are more ambiguous words than non-homophones.⁷⁶ Mirman, Strauss, Dixon, and Magnuson in 2009 implicated the same relationship of increased ambiguity in homonyms.⁷⁷ They also concluded that “[there is] greater competition between meanings of ambiguous words when the meanings are from the same grammatical class (noun–noun homonyms) than when they are from different grammatical classes (noun–verb homonyms).”⁷⁸ The ambiguity of homophones and homonyms in Riddleyspeak could indicate a greater difficulty in recognizing one form of *hart* before another, particularly because each *hart* is a noun. The same challenge of ambiguity applies to *wood*, *wud*, and *Wud*.

Riddley’s uses each variation of these homonyms and homophones very often and each combination implies a different image or metaphor. Because of the ambiguity of each word or phrase, Riddley draws *connexions* between the separate connotations of the

homonyms and homophones. After an epiphanic moment in the ruins of Cambry, Riddley creates an original story entitled *Stoan*. He concludes the story: “The hart of the wud is in the hart of the stoan where the girt dans is.”⁷⁹ Riddley then explains his new reasoning: “From now on when I write down about the tree in the stoan Iwl write *wud* not wood. You see what Im saying its the hart of the wud its the hart of wanting to be.”⁸⁰ The entire novel, Riddley has struggled to understand and express the “thing what lives inside us and afeart of being beartht.”⁸¹ The metaphor *hart of the wud* is Riddley’s attempt to explain the concept of “that thing what lives inside us.” Riddley’s approach to the metaphorical grounding of an abstract concept reflects the homonyms and homophones unique to his dialect. He is also one of the rare few generating a written record. Riddley’s new connotation for *hart of the wud* could become a popular phrase because Riddley’s society regards written record with *Truth*.

The metaphors and words of Riddleyspeak indicate a world-perspective grounded in the linguistic compulsion to draw *connexions* from every experience. This system of justification perpetuates the *Mind as a Machine* metaphor as society attempts to connect itself with the past. Thoughts and data become tangible equivalents that a person can gain or lose, unified by a belief that numbers comprise the essence of everything. Riddley’s system of linguistic exploration through *connexion* allows him to invent new phrases and metaphors, displaying the potential of Riddleyspeak as a creative medium. In trying to rediscover lost science, Riddley’s society gained a unique language— even if the science they do manage to uncover will bring about their destruction.

***A Clockwork Orange* and Linguistic Relativity**

Unlike the languages *Riddley Walker* and *1984*, the language called “Nadsat” does not represent the dialect of an entire society, but serves as the voice of a counterculture. In *A Clockwork Orange*, Anthony Burgess needed a form of English as deranged, yet poetic as the young narrator, Alex. The word Nadsat itself is a literal translation of the Russian word for “teen.”⁸² While the socialized dystopia of *A Clockwork Orange* might seem more familiar than the desolated worlds of Oceania or Cambry, Alex is far more alien to the average reader than either Winston or Riddley. When we are first introduced to Alex, his life is devoted to the destruction of a world that he considers confining and inferior. He reveres his violence as an art and uses innocent men, women, and children as his canvas. Along with his *droogs*, Alex forges his own social norms to sanction his renegade behavior. Nadsat operates as a reflection of Alex’s morphed reality. It pulls readers into a world where the grotesque becomes beautiful and rape becomes sport.

Through the lens of linguistic relativity, Nadsat reduces the severity of Alex’s perception of crime and aggression. In some cases, the Nadsat phrasing even reverses the negative connotation of an action. It redirects Alex’s pleasure and remorse to atypical subjects. Nadsat encourages him to romanticize violence and ultimately makes him capable of horrendous acts. However, Nadsat is also the source of Alex’s linguistic freedom. Alex toys with words, sounds, and patterns to express his poetic perspective of the “socially unacceptable.” In many situations, Nadsat allows for flexibility that modern English cannot match. For Alex’s sadistic purposes, Nadsat is the superior creative outlet.

The basic foundation for Nadsat is the extensive list of vocabulary. The most common alteration Burgess utilizes is the substitution of common English words with

Russian equivalents. He converts the Russian into a simpler English spelling, often truncating the word. Of the borrowed Russian words, the majority are nouns, though there are a significant number of verbs and adjectives. Burgess trusts that repeated contextual clues are adequate explanation for readers and from the first page, he immerses readers in Nadsat. Alex introduces readers to a routine night for a Nasdat gang:

Our pockets were full of deng, so there was no real need from the point of view of crasting any more pretty polly to tolchock some old veck in an alley and viddy him swim in his blood while we counted the takings and divided by four, nor to do the ultra-violent on some shivering starry grey-haired ptitsa in a shop and go smecking off with the till's guts. But, as they say, money isn't everything.⁸³

This passage introduces many of Nadsat words that are common throughout the novella and most of them are Russian: *deng* replaces money, *crasting* is robbing, *viddy* is watch, and *ptitsa* is one of many words Alex uses for girl. While Nadsat often exemplifies Alex's affinity for violence, many of the replaced words have no direct connection crime. A common theory for Burgess's choice to juxtapose English and Russia is the emphasis of disparity between western capitalism and Soviet communism. In his analysis of Nadsat, Robert Evans suggests: "[Burgess] makes the argot Russian, as if to warn his readers of what society may become if it communizes itself along Soviet lines... the message is similar to that in other distopias that deal in visions of society in the future after it has become static, completely controlled, amoral, and heartless."⁸⁴ He indicates that the inclusion of Russian could be a symbolic choice, intended to impact readers based on their prior knowledge of global politics; it speaks less for Alex's character. Burgess has admitted that, while creating Nadsat, the choice to use Russian was a simple process: "It wasn't viable to use the existing

[English] dialect as it would soon be out of date. Then I went to Leningrad... and I found they were having problems with teenagers too. So I combined the dialects.”⁸⁵ Russian makes Nadsat unique enough to stand apart from common slang and establish the style of *A Clockwork Orange* as a timeless experience.

The list of Nadsat-specific vocabulary provides a backbone for Alex’s language, but there Alex is also an inventive narrator. His dialect is a playful combination of Nadsat words and Alex’s own neologisms.⁸⁶ He introduces elements such as rhyme, onomatopoeia, alliteration, metaphor, and repetition to create unconventional perspectives of taboo subjects like assault. Emulating his love of music and art, Alex uses his own poetic language to transfer their qualities to his third love: violence. Consequently, his creative abilities become entwined with Nadsat and the implications of its vocabulary.

For Alex and his *droogs*, one of the repercussions of the Nadsat replacement words is objectification and women are one of the most frequent targets. Alex’s Nadsat vocabulary for women is extensive—roughly double the number of words he uses in reference to men. He generally uses *dama*, *devotchka*, or *ptitsa* for young girls. The words for older women are more numerous: *dama*, *cheena*, *lighter*, *sharp*, *soomka*, or *baboochka*. While these labels already imply a range of ages, Alex will often provide an additional judgment of a woman as young or *starry*, meaning old. Readers receive multiple layers of description, creating a fairly accurate image of age for each woman. As a first impression, age seems to be the focal point of Alex’s attention. His attentiveness does not transfer to male depictions. When Alex meets a man in passing, the phrase *some veck*, (some guy), usually suffices for Alex’s narration. In the span of a paragraph, Alex labels a group of elderly women as both “wrinkled old lighters” and “poor old baboochkas.”⁸⁷ Later, he rapes two schoolgirls that he

calls “ten-year-young devotchkas,” leaving no confusion as to the age of his victims. Nadsat provides Alex a wide vocabulary to classify women based on their physical appearance.

Sexual objectification of women is characteristic of many existing examples of slang dialect. Studies of American English slang revealed that males tend to be the creators and perpetrators of new slang terms. Slang labels for women gain negative or sexualized connotations more often than male labels.⁸⁸ Worse still, recent research suggests that sexual objectification of rape victims diminishes the perceived suffering that observers attribute to the victim.⁸⁹ Alex’s objectification through Nadsat increases his capacity for rape. Each label encourages a judgment of age-based physical appearance, which also indicates the potential for Alex’s sexual gratification. This system of classification also detaches Alex from each victim, obscuring his perception of their pain. He illustrates this disconnect with his justification of raping the young girls: “But they were both very very drunken and could hardly feel very much.”⁹⁰ Alex enjoys his bout of *in-out in-out*, undisturbed by the physical and mental pain he inflicts because his perception of that pain is minimal.

When Alex refers to his most violent crimes, he uses crude euphemisms that demean the brutality of his actions. Savage beatings become *ultra-violence* and rape becomes *in-out in-out*. Alex uses these terms with reverence and nostalgia, often saying “the old *in-out in-out*” or “the old *ultra-violence*.” When he is finally arrested at the end of Part One, Alex confesses to the police and he reduces his extensive crimes into curt euphemisms and Russian slang.

I had this shorthand millicent, a very quiet and scared type chelloveck, no real rozz at all, covering page after page after page after. I gave them the ultra-violence, the

crasting, the drasting, the old in-out in-out, the lot, right up to this night's veshch with the bugatty starry ptitsa with the mewing kots and koshdas... When I'd got through the lot the short-hand millicent looked a bit faint, poor old veck.⁹¹

The pages of vicious detail disgust the trained officer (*millicent*), but to Alex, it's all the same old *ultra-violence*. Even Alex's response to the revelation that the woman he assaulted died from her injuries is a clichéd euphemism: "The old ptitsa who had all the kots and koshkas had passed on to a better world in one of the city hospitals. I'd cracked her a bit too hard, like."⁹² The phrase "passed on" implies a peaceful, natural liberation from the mortal coil. Similarly, "a bit too hard" is a grossly lenient wording that undermines his responsibility for her death. This denial is especially apparent when Alex refuses to use the word "evil" and instead opts for "the other shop."⁹³ While he abhors conformity to societal norms, he avoids accepting that his rebellion makes him inherently evil.

The euphemism *in-out in-out* exemplifies a metonym in which the concept of rape is associated with a specific physical attribute of rape. Lakoff and Johnson explain that metonymy "has primarily a referential function, that is, it allows us to use one entity to *stand for* another... it allows us to focus more specifically on certain aspects of what is being referred to."⁹⁴ For Alex, *in-out in-out* emphasizes the specific action of rape that generates physical pleasure. The victim is an objectified accessory to his sexual satisfaction and Alex feels little empathy for his victim's pain because of objectification. This Nasdat euphemism shifts Alex's perception towards his concrete physical gratification and away from the victim, further diminishing the damaging realities of rape. *In-out in-out* exacerbates his flippant attitude for culpability and voracious appetite for rape.

Research of modern English speakers suggests that euphemisms influence the perception of and emotional response to the replaced subject. “Euphemisms are... effective because they replace the trigger by another word that expresses the same (or similar) idea, allowing the relevant message to be communicated without triggering the emotional response. This in turn allows speakers (and listeners) to think about issues that might otherwise be avoided.”⁹⁵ The joking euphemisms in Alex’s narration, such as “passed on,” remove the emotional impact of the finality of death. In the cases of *ultra-violence* and *in-out in-out*, the euphemism facilitates the replacement of the negative victim-centric connotations of rape and assault. These acts become manifestations of pleasure and hallmarks of personal fulfillment, leading Alex to pursue them without remorse, but with fervor.

The unique Nadsat jargon devoted to violence portrays Alex’s love of bloodshed, but Alex reserves some of his most emphatic words for his second passion: music. In the first section of the novella, Burgess provides two very detailed scenes where Alex revels in the musical ambiance of Beethoven, Mozart, Bach, and other greats. The tone of Alex’s narration during these passages starkly contrasts with his descriptions of crime. There is a clear economy of words in Alex’s action description. He rarely lingers on a single subject for more than a sentence, instead moving from detail to detail, moment to moment, to create a rolling momentum for his story. During fights, the brevity each statement mirrors Alex’s real-time experience:

So we cracked into him lovely, grinning all over our litsos, but he still went on singing. Then we tripped him so he laid down flat and heavy and a bucketload of beer-vomit came whooshing out. That was disgusting so we gave him the boot, one

go each, and then it was blood, not song nor vomit, that came out of his filthy old rot.
Then we went on our way.⁹⁶

While Alex appreciates the subtleties of each brawl, he usually lists each significant element for readers and moves forward with his narration.

Alex approaches music in an opposite manner. He becomes a stationary observer, absorbing each layer of the music and allowing himself to bask in his elation. These passages portray a pure contentedness in Alex that dwarfs any affection he conveys for crime. Even the vocabulary is distinct; certain words only appear in conjunction with his experience of music. After viciously beating the author, F. Alexander, and raping the author's wife, Alex returns to his room and plays record after record, dissecting the instrumentation and professing his ecstasy with grandiose description:

Oh, bliss, bliss and heaven. I lay all nagoy to the ceiling, my Gulliver on my rookers on the pillow, glazzies closed, rot open in bliss, slooshying the sluice of lovely sounds. Oh, it was gorgeousness and gorgeosity made flesh. The trombones crunched redgold under my bed, and behind my gulliver the trumpets three-wise silverflamed, and there by the door the timps rolling through my guts and out again crunched like candy thunder. Oh it was wonder of wonders.⁹⁷

This represents only a fraction of the original passage; Alex's swooning continues for nearly a page. The phrases and vernacular present in this segment are almost alien compared to Alex's normal Nadsat discourse. In fact, this is the singular appearance of "wonder" in the novella. The words "bliss" and "gorgeousness" are only present within the two instances of Alex listening to music in Part One. The word *gorgeosity* reappears once more outside of this passage: in the last paragraph of the penultimate chapter when Alex listens to music

for the first time post being cured of “the cure.” In some versions of *A Clockwork Orange*, this is the final paragraph of the book. All of these words are native to modern English, with the exception of *gorgeosity* which is an obvious derivative of gorgeous.

Esther Petix extends this trend to all of Nadsat: “Closely linked... are certain words conspicuous by their absence. There are no words, for example, that give positive feelings of warmth or caring or love. When Alex wants to refer to goodness he has to do so by opting out of Nadsat.”⁹⁸ Music elicits emotions in Alex that he cannot express with Nadsat. Generally, the vocabulary unique to Nadsat is grounded in physical object or action. Words for abstract and subjective concepts, such as “bliss” and “wonder,” are nearly absent from Nadsat. Also, the color-based (*redgold*) and spatially-oriented (under my bed) metaphorical imagery that Alex uses to describe the sound of each instrument is almost entirely English-inspired. Depictions akin to these romantic phrases are absent from Alex’s narration of his nightly *ultra-violence*.

As a consequence of the uplifting nature of the passage, Alex’s poetic voice becomes atypical. He provides inventive words like *redgold* and *three-times silverflamed*, for sensory experience, demonstrating his creative linguistic style. However, Alex’s imaginative wordplay ends at subjective feelings of happiness. The phrases “oh it was bliss” and “wonder of wonders” are clichéd and repetitive. Within the realm of Nadsat, Alex is a master capable of crafting rich, artistic phrases. While he understands concepts foreign to Nadsat, he is unpracticed in the diction required to express himself in a genuine and unique manner. This linguistic challenge arises again in the final chapter of *A Clockwork Orange*.⁹⁹

The only “positive” word found in the Nadsat vocabulary is the replacement for “good”: *horrorshow*. Burgess derives *horrorshow* from Russian, but also designs the spelling

as a pun for “horror show.” Whenever Alex uses *horrorshow* in place of “good,” he indirectly evokes the word “horrific.” The denotation and connotation oppose each other. “Horror show” also implies graphic violence. Before his first film viewing, Alex suggests that the movie might be “real *horrorshow*” and the doctor jests: *Horrorshow* is right friend. A real show of horrors.”¹⁰⁰ Burgess explicitly explains the pun to reaffirm that Alex is aware of its double meaning.

In one sense, Alex could be opposing the societal norm that violence is a undesirable. By describing an experience or object as *horrorshow*, Alex displays approval that is derivative of his approval for violence. In another sense, *horrorshow* is satirical, even when Alex is attempting to speak genuinely. The latter is apparent in the final chapter, Alex meets Pete’s wife, Georgina, and describes her as: “real horrorshow, not the sort you would want to like throw down and give the old in-out in-out to, but with a horrorshow plot and listo (face) and a smiling rot (mouth) and very very fair voloss (hair) and all that cal.”¹⁰¹ Nadsat undermines Alex’s ability to convey his admiration of the woman to readers. Immediately after referring to the woman as *horrorshow*, Alex must clarify that she is not the sort of “good” woman that he would enjoy raping. The distinction is necessary because Alex’s precedent for the connotation of *horrorshow* applied to women. When the doctors demonstrate the success of Alex’s conditioning, they parade a naked woman before him. Alex’s explains: “She had real horrorshow groodies (breasts), all of which you could viddy... and yet her litso (face) was a sweet smiling young like innocent litso... I would like to have her right down there on the floor with the old in-out in-out real savage.”¹⁰² *Horrorshow* becomes Alex’s adjective of choice to objectify the woman and his desire to rape her naturally follows. The passages have an eerie similarity as Alex notes that each woman has

a pleasant face, yet he respects one and lusts for the other. Nadsat, and *horrorshow* in particular, are incompatible with gentle or encouraging thought.

The final chapter of *A Clockwork Orange* depicts a dramatic shift in Alex's approach towards life and intentions for the future. The uncharacteristic warmth he feels for Georgina indicates the beginnings of Alex's adulthood. While the chapter was omitted from Kubrick's film adaptation and early American copies of the book, Burgess defended his decision to evolve Alex: "I put in a chapter at the end where Alex was maturing; he was growing up and seeing violence as part of adolescence. He wanted to be a married man and have a child. He sees the world going round like an orange... I still believe in my ending."¹⁰³ Despite Burgess guiding Alex towards social conformity and responsibility, he continues to use Nadsat as Alex's narrative style. In many ways, Nadsat is at its best when Alex is brutal or condescending; the language is ill-suited for complacent family life. An exchange of Nadsat for standard English would ready Alex for societal progression, but at a cost.

In his analysis of Nadsat, Robbie Goh suggests that the disparity between Alex's language and his future hinders articulate or creative communication. He elaborates that this linguistic obstruction is especially apparent in the final paragraph: "While some traces of Nadsat remain, Alex's language mutates into the inherited language of mechanical repetitions associated... with politicians, adults in bad faith, and social powers. Thus the repetition in quick succession of the vague phrase "all that cal," is a sight that Alex cannot find inventive language equal to the situation before him."¹⁰⁴ Recall that Alex also concluded his observation of Georgina with "all that cal." There is an intimacy and sincerity to Alex's thoughts that are not only surprising to the reader, but also to Alex. Earlier in his life, these feelings were the object of ridicule for Alex and his *droogs* and Nadsat was a

manifestation of their mockery. For example, Alex and the others heckle a young couple for *lubbilubbing*: kissing romantically.¹⁰⁵ The term “all that cal” serves as a placeholder for the sentiments that Alex cannot express. It also suggests a lingering Nadsat ambivalence that Alex must overcome to transition into adulthood. When Goh refers to the “repetitions of adults,” he indicates the standard English used by characters like Alex’s parents or P.R. Deltoid—a language comparatively bland when read in conjunction with Alex’s Nadsat. Goh suggests that Alex emulates their diction as an “inheritance.” The language of adulthood is an inevitable trade. Common English prepares Alex to operate as a working member of society, but it deprives him of the inventive and poetic wordplay that created art from violence and supported an entire lifestyle.

If Alex can slip back into English whenever Nadsat falls short of expressing subjective experience, then is he negating the impact of the Sapir-Whorf Hypothesis? Throughout *A Clockwork Orange*, Alex is in clear defiance of linguistic determinism. He uses comically proper English when conversing with his parents and P.R. Deltoid as a manipulative tactic, but returns to his sly and poetic Nadsat for a night of good old *ultra-violence*. His linguistic adaptation and creativity exemplify an intellect undetermined by a simple list of words. Instead, he uses language to his advantage by understanding both the limits and strengths of each dialect. The decision to abandon his youth bares the consequences of abandoning Nadsat, though Alex has not accepted this sacrifice by the conclusion of the final chapter. Despite an effort to remain in Nadsat, Alex struggles to find adequate Nadsat words or phrases to express his final thoughts. The vagueness of his language also reflects an immature perception of these fresh, adult ideas. Thus, he is capable of using Standard English for deceit, but not quite proficient enough to cultivate

genuine expression towards others or for himself. This interaction between Alex and the nuances of each language illustrates linguistic relativity.

Alex's interactions with his parents and P.R. Deltoid in Part One are drenched with Alex's insincerity and disrespect. For example, after skipping school, he creates an excuse to placate Deltoid: "'A rather intolerable pain in the head, brother, sir,' I said in my gentlemen's goloss. 'I think it should clear by this afternoon.'"¹⁰⁶ The adopted English is uppity and overstated. He also displays no hint of remorse or emotional association to the lie. The 'gentlemen's *goloss*' is a secondary dialect for Alex, not unlike a second language. Recent research conducted by Catherine L. Caldwell-Harris and Ayşe Ayçiçeği-Dinn investigated how bilingual persons emotionally responded to lying in different languages. Results suggested that the speaker experienced greater emotional investment when telling a lie in his/her primary language. Regardless of the specific emotion evoked by the lie, the speaker felt a stronger connection to the statement. Conversely, lies told in the secondary language were "not felt as strongly."¹⁰⁷ Alex's narration implies that Nadsat is his primary language of communication and thought, while Standard English is his secondary. When Alex lies in Standard English, he is more apathetic than if he were to lie in Nadsat. Obviously, the variation between Nadsat and Standard English is minimal compared to the difference of two separate languages. However, Alex must make an extra effort to find appropriate English words and phrases, deviating from his normal diction. This deviation from familiar to foreign, while less extreme, is similar to the strain of translation from primary to secondary language. Dissociated from the language he speaks, Alex experiences little emotional inhibition or culpability. He becomes capable of spinning lie after lie to adult authority figures at his own convenience.

After his conversation with Deltoid, Alex arrives late to a meeting with his *droogs*. He delivers the same excuse of a bad headache, but this time in Nadsat. Georgie jokingly calls Alex's bluff and Alex becomes instantly defensive. He replies to Georgie: "This sarcasm, if I may call it such, does not become you O my little friends. Perhaps you have been having a bit of a quiet govoreet behind my back."¹⁰⁸ Nadsat reflects the camaraderie between Alex and his *droogs*. One of the common purposes of slang, especially in teen culture, is the creation of an in-group/ out-group dynamic.¹⁰⁹ When he speaks to his *droogs* in Nadsat, Alex expects respect as gang leader. He perceives Georgie's comment as an attack, whereas a similar comment from Deltoid is insignificant. Alex's response to Georgie evokes more of his "gentlemen's goloss" than Nadsat. The change of diction reflects Alex's attempt to demean Georgie and remove the bond of in-group language.

The density of Nadsat vocabulary in Alex's narration requires readers to synthesize contextual clues and interact with the text in order to understand many of the scenes. The effects of in-group/ out-group separation influence Alex's other creative linguistic tools. Specifically, Alex favors a technique that phonetically conveys his sensory experience: onomatopoeia. In his analysis onomatopoeia, Hugh Bredin argues that typical English speakers can recognize or invent new examples of onomatopoeia with ease.¹¹⁰ Thus, Alex's onomatopoeic words are intuitive and accessible for readers. Often, Alex's onomatopoeic words not only distinguish the type of sound, but also his relationship to that sound. They also exemplify the inventive and poetic nature of Alex's diction.

Integral to the definition of onomatopoeia is the "relationship between the sound of a word and something else."¹¹¹ However, both the approach to both the "relationship" and the "something else" varies depending on the word.¹¹² One approach to onomatopoeia,

articulated by Bredin, categorizes onomatopoeic words into three groups: direct, associative, and exemplary. The majority of Alex's onomatopoeia falls under the class of direct, which implies that "the sound of the word resembles the sound that it names."¹¹³ Alex describes the sound of his lip music as "brrrrzzzzrrrr"¹¹⁴ and the sound of a chain as "whisssssshhhhhhhh."¹¹⁵ These words are more emphatic than "buzz" or "whish" because they are elongated. Alex even offers a second version of lip music when the source is another man: "prrrrrzzzzrrrr."¹¹⁶

Robbie Goh suggests that the subtle variations of each version of an onomatopoeic word are significant: "The differences in the two representations reinforce the concreted distinctiveness of these two experiences, as perceived by Alex."¹¹⁷ When Alex reiterates each variation of the sound, it is possible his recollection of the experience is also specific to that variation. A study conducted in 2009 by Naoyuki Osaka explored the relationship between onomatopoeia and visual perception. Participants in the study closed their eyes and listened to onomatopoeic words that imitated the sound of walking. Despite receiving no visual stimulation, the participants displayed activation of their visual cortex. Specifically, the visual cortex responded as if each participant was watching a person walk. The findings suggest that onomatopoeic words can induce visual processing.¹¹⁸ The disparity in sound represented by each of Alex's onomatopoeic words for lip music implies two distinct perceptive experiences for Alex. His perceptive visual recollection of the events associated with each sound could be unique for each sound.

Goh also isolates another style of Alex's inventive onomatopoeia in the iterations of the word *chumble*. Alex first uses *chumble* to describe the pitiful noises of a toothless man after destroying the man's dentures. *Chumble* is a clearly a variation of the word "mumble."

Later, Alex refers to his father's speech as "humble chumble mumble."¹¹⁹ Goh believes that Alex's return to the word *chumble* indicates that Alex's father also wears dentures. As an onomatopoeic word, mumble aligns with Brendin's category of associative onomatopoeia. Brendin explains: "[Associative onomatopoeia] occurs whenever the sound of a word resembles a sound *associated with* whatever it is that the word denotes."¹²⁰ The word "mumble" imitates the sound created when a person speaks in a specific fashion. The sound associated with the speaking action becomes the label for that action. *Chumble* utilizes a similar association, although Alex designates a slightly different sound to represent toothless mumbling.

The combination "humble chumble mumble" constitutes the final category of onomatopoeia: exemplary. This third style accounts for "the physical work used by a speaker in uttering a word."¹²¹ Goh suggests that the repetition of the "umble" sound implies "impeded or difficult" speech. His conclusion reflects the awkwardness of reciting the phrase. An exemplary analysis also leaves "humble chumble mumble" open for alternative interpretation. For example, the sequence of "um" sounds could also create a sense of wandering or passivity. An obvious quality of Alex's sound repetition is a rhyming pattern.

The lens of exemplary onomatopoeia emphasizes that the phrase "humble chumble mumble" is physically an arduous word to enunciate. Rhyme introduces a lighter quality: humor.

The tonal influence of rhyme is very context-specific. For Alex, rhyme is primarily a playful or comedic tool. He separates himself from society by belittling both adults and their laws. Before his incarceration, Alex has no respect for authority figures, especially his

parents. Therefore, when Alex describes his father's speech as "humble chumble mumble," he is poking fun at his father's words; he has no intention of considering his father's advice. Alex uses rhyme to accentuate his comedy and disrespect. Research conducted by the University of Berlin in 2014 suggests that the relationship between rhyme and humor exists at a cognitive linguistic level. They posited that "in humoristic poetry, rhyme and meter appear to not just support the humorous semantic content, but to become inherently funny as poetic features."¹²² Their findings suggested that rhyme and meter increased perceived humor of comedic passages. Participants also found passages containing rhyme to be more memorable and easier to comprehend.¹²³ The joking tone of Alex's narration indicates the humorous intention behind most of his rhymes. Each new rhyme that Alex creates encourages a comedic perception of his environment.

The comedic perception of rhyme is also applicable to the examples of Cockney rhyming slang in *A Clockwork Orange*. Rhyming slang replaces a common word with a separate word or phrase that rhymes with the original word. Common examples include "dog's meat" as a replacement for "feet" and "apples and pears" as "stairs."¹²⁴ Alex uses four different Nadsat words for money: *deng*, *cutter*, *golly*, and *polly* (sometimes *pretty polly*). Of the four, three are rhyming slang. Only *deng* originates from Russian. Both *golly* and *polly* rhyme with the word *lolly*, which was an existing slang word for money.¹²⁵ *Cutter* is the rhyming equivalent for "bread and butter."¹²⁶ Obviously, Alex does not recall the rhyming referent whenever he says *lolly* or *cutter*, but the influence of rhyme was central to the conception of these Nadsat words. The rhyming slang matches Alex's flippant attitude towards money. He and his *droogs* spend their money as quickly as they steal it. They do not rob out of necessity— they rob for the sport of the crime. Alex squanders his plunder

on drinks and snacks for old women at the bar and later gives his money away to his father. The rhyming slang labels from money undermine its material value for Alex. *Polly* and *cutter* are simply an excuse for violence or an avenue to drugs and alcohol. Investment and savings are inconsequential. These words serve Nadsat's facilitation of counter-culture by opposing the frugal nature of adult society. The socialized system of Alex's world requires all adults to maintain an occupation. The theft and waste of money specifically contradicts the communal attitude required to maintain such a system.

In all, the Nadsat lifestyle and language of Alex and his *droogs* is essential to existing outside of conventional society. As Lakoff and Johnson suggest: "we experience our 'world' in such a way that our culture is already present in the very experience itself."¹²⁷ Rather than rebel from *within* society, Alex elevates himself above conformists and organizes his own social hierarchy. Rather than oppose existing connotations for rape and violence, he recreates the conceptual foundation for both. Alex can ignore the inherent evil of both these actions because his language defines them as good and pleasurable. To consent to the label of "evil" implies to an acceptance that Alex is in the wrong. If the crimes he commits are not evil by definition, then he will not perceive himself as evil.

One might argue that Alex has no need to reverse the meanings of "right" and "wrong" because he would feel no remorse regardless of the label. It is unlikely that Alex is incapable of the full range of human emotions because of Burgess's emphasis of choice. The final chapter of *A Clockwork Orange* affirms that Alex can change as long as he wills it. In defense of this chapter, Burgess writes: "By definition, a human being is endowed with free will. He can use this to choose between good and evil. If he can only perform good or only perform evil, then he is a clockwork orange."¹²⁸ Like every human, Alex has both good and

bad tendencies. Nadsat aids Alex's perception, allowing him to embrace brutality without suffering from internal conflict. Thus, Nadsat perception could contribute to the reduction of cognitive dissonance.

Devoted to the Nadsat lifestyle, Alex uses his linguistic ingenuity as a profession of love for every act that counters traditional society. Whether he's terrorizing a family in their home, or lying his way through a conversation with his parents, Alex delights in his rebellion. Because Nadsat is a celebration of Alex's passions, it is his perfect poetic medium. Standard English is incompatible with his topics of expression, but Nadsat suffers a similar weakness for matters of adulthood. Alex's revelatory moment reads like the discovery of infection: "I felt this bolshy big hollow inside my plott, feeling very surprised too at myself. I knew what was happening, O my brothers. I was like growing up."¹²⁹ Assuming Alex fills his "bolshy big hollow," his sick void, he will have to adapt to a language that supports the conventionality of married life and parenthood. Linguistic relativity allowed Alex find art in sadism and one day, it might reveal the grandeur of a simple life.

Conclusions

The Sapir-Whorf Hypothesis indicates the essential link between created language and fictional culture in all three dystopian worlds. However, the implications of linguistic determinism in Orwell's *1984* distinguishes Newspeak from the languages of *Riddley Walker* and *A Clockwork Orange*. In theory, the limited vocabulary of Newspeak will breed a race of subservient, self-regulated Party members, allowing Oceania and *Ingsoc* to operate unopposed for centuries. In practice, the deterministic language predisposes Party members to *thoughtcrime* and leaves them incapable of basic problem-solving. The only cultural indicators present in Newspeak are the politically-charged words like *Ingsoc* or *doublethink*. *Ingsoc* has numerous connotations, making it vague, empty word and *doublethink* contradicts the theory of cognitive dissonance, agitating the would-be complacent Party members.

The subtleties of language that allow for unique metaphorical grounding of experience do not exist in Newspeak. A complete implementation of the language would strand Party members with diminished ability to perceive or understand abstract concepts. Because Outer-Party members are incapable of managing their own simple society through the limited language of Newspeak, Inner-Party elites and violent thought police must maintain order. In attempts to determine the lives and thoughts of Party members, the Inner-Party fails in creating a self-propelled slave culture. The violence and espionage required to maintain Oceania merely create a culture of fear. Ironically, Winston is at his most introspective when he is analyzing *Ingsoc*— when committing *thoughtcrime*. Of course, Winston can only rebel through *thoughtcrime* for so long. All that remains at the

end of the novel is Winston's sickening acceptance and the fear it generates in readers. This fear saturates *1984*, making the book powerful and terrifying.

The potency of both *Riddley Walker* and *A Clockwork Orange* grow from the freedom of each language, not the restriction. The unique traits that make of Nadsat and Riddleyspeak culturally rich and creative languages exist because neither language ascribes to linguistic determinism. Burgess writes Alex's character as a linguistic artist. Nadsat is tailored to the culture that he loves and Alex takes creative license to push the language beyond the limits of its vocabulary through rhyme, onomatopoeia, and other wordplay. He even recognizes the limits of Nadsat and finds alternative English words or euphemisms to compensate. While these Standard English replacements are less creative, they are adequate to convey meaning. This display of strength and weakness of language illustrates the sifted perceptions created by linguistic relativity. But, most importantly, its flexibility allows Alex to pursue poetic language and create a dialect that supports the culture in which he wants to live.

Riddley connects words through similar sound to create new metaphorical meanings. He implements creative symbols into his own stories and experiments with his narration. While his society lacks technological understanding, they create quirky linguistic connotations through their clever, mostly incorrect scientific explanations and legends. Both Riddley and Alex's languages reflect their distinct cultures, but they do not confine either character to those cultures. Rather, the language fosters a creative approach to words, understanding, and experience. In this way, linguistic relativity is an invaluable connection between culture and language that makes the worlds of *Riddley Waker* and *A Clockwork Orange* mesmerizing and genuine.

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